

## Supporting Information

### **Bio-inspired, robust, and anti-swelling hydrogel sensors for underwater information transmission**

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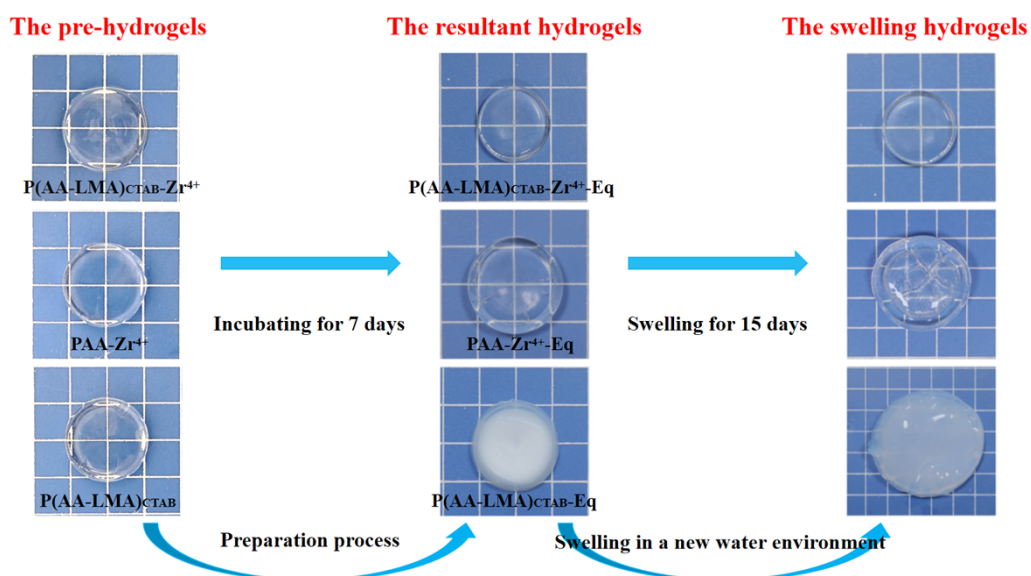


Fig. S1. Diagram of preparation and swelling process of the hydrogels.

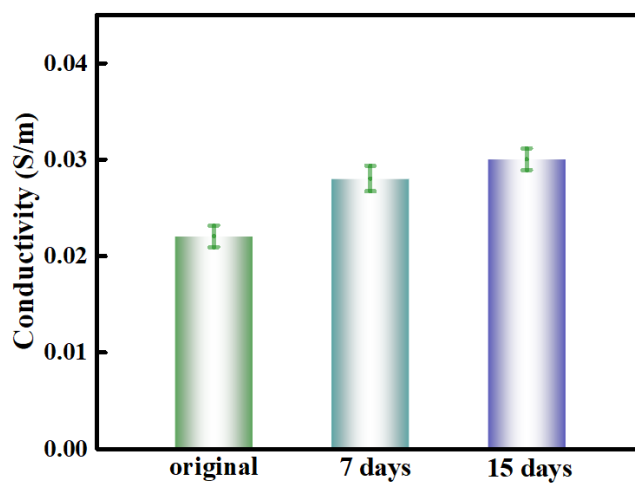


Fig. S2. Conductivity of the  $P(AA-LMA)_{CTAB}-Zr^{4+}-Eq$  hydrogels ( $Zr^{4+}/AA$  molar ratio of 3%) after swelling in deionized water for different days.